ZUNI RIVER WATERSHED GEOGRAPHIC PRIORITY AREA ENVIRONMENTAL ASSESSMENT

INTRODUCTION

This environmental assessment (EA) is being prepared by the United States Department of Agriculture Natural Resources Conservation Service (NRCS) to comply with the requirements of the National Environmental Policy Act of 1969 and implementing regulations at 40 CFR Parts 1500-1508. The EA will assist NRCS in determining whether the proposed action will have a significant impact on the quality of the human environment and therefore requires preparation of an Environmental Impact Statement.

NEED FOR PROPOSED ACTION

Purpose of and Need for Action: There is a need in the Zuni River Watershed Geographic Priority Area (GPA) to improve range conditions to reduce blowing dust and reduce sedimentation in surface water. The purpose of meeting these needs is to allow for desirable plant growth, maintain sustainability of the livestock industry, improve wildlife habitat, control invasion of brush and noxious weeds, reduce deposition of sediment in basins, wetlands and water bodies and protect the habitat of several endangered and threatened species.

Background:

The Zuni River Watershed Geographic Priority Area encompasses 411,522 acres in the Zuni Mountains and the Whitehorse Draw region with associated drainages to the west which include all contributing tributaries of the Zuni River above the Zuni Indian Reservation. This GPA includes the McKinley and Lava Soil and Water Conservation Districts. It is a diverse area with mosaic ownership, which is experiencing resource problems with soils, water, grazing lands, wetlands and fish and wildlife habitat. Areas of concern include excessive erosion and runoff, declining water tables and water availability, sedimentation/deposition, riparian habitat damage, invasion of noxious weeds and brush, loss of forest and grass cover, and invasion of non-indigenous species.

Resource damage is occurring in all cover types in the watershed, which include woodland, cropland, and rangeland with the most serious degradation taking place on the rangeland. Most problems have been from lack of management of cattle and wildlife, especially elk, poor forest management practices, and lack of adequate water development. Some areas have experienced a tremendous increase in road density, which has accelerated runoff and erosion in these affected areas.

Erosion is manifest by elevated levels of wind born sediment and accelerated gully formation. Declining water resources has resulted in increased pressure on those water sources available such as riparian areas and constructed water development. This competition for available water has resulted in overgrazing, poor distribution of livestock and increased streambank degradation, sediment and deposition and concomitant

flooding. Grazing lands have also suffered from lack of management with resource damage being visible by invasion of noxious weeds and brush, loss of plant diversity and excessive grass and plant depletion. Hydrologic modification, sedimentation, and loss of plant diversity have negatively impacted wetlands. This in turn has impacted on wildlife with a loss of forest and grass cover, habitat fragmentation, and eutrophication of lakes and invasion of non-indigenous species.

The ranch demographics in the Zuni River Watershed Geographic Priority Area are made up of Navajo, Hispanic and Anglo ranchers. Approximately 85 ranches are located in this watershed area with a diverse land status. This land status includes: public domain, resettlement purchase land, U.S. purchase lands, Indian allotment, fee lands, state lands, forest lands, executive order lands, departmental order lands, trust lands, U.S. statute lands and administrative reserves.

By definition all American Indians are considered limited resource produces. A large percentage of the Hispanic and Anglo producers also fit the limited resource producer category. Most of the ranches graze livestock including the irrigated Ramah Valley where forage production and livestock grazing take place.

ALTERNATIVES:

Alternative 1. No Action

Alternative 2. Proposed Action: Utilize NRCS Environmental Quality Incentives Program (EQIP) authorities to assist ranchers in the Zuni River Watershed Geographic Priority Area (GPA) to apply conservation systems which include chemical and mechanical brush control, range planting, prescribed grazing, fencing, water development (wells, spring development, ponds, livestock pipelines, troughs or tanks), pest management (noxious weeds), critical area planting, streambank and shoreline protection, structure for water control, riparian forest buffers, forest stand improvement, wildlife upland habitat management, and wildlife watering facility. These practices alone or in concert will address the proposed needs.

ALTERNATIVES CONSIDERED BUT NOT STUDIED IN DETAIL.

Several alternatives were considered for conservation in the Zuni River Watershed. One alternative was to pay for management practices. While the local work group concurs with the need for management the consensus is that management is required in the EQIP conservation plans and therefore should be carried out by the producer without cost share assistance. It was also believed by the (LWG) that management payments only are not practical for small operating units.

Another alternative considered was assistance with irrigation practices to conserve water. The local work group believes that most of the conservation measures to address

irrigation in the Ramah Valley have already been installed. This coupled with the relatively small acreage (1,200 acres in a 412,000-ac. watershed) in the irrigated Ramah Valley would realize only a minimal return in resource protection for the expenditure of both financial and technical capital. This expenditure of financial and technical assistance cannot therefore be justified.

SCOPING OF ISSUES FOR UNIQUE AND PROTECTED RESOURCES IN THE AREA:

NRCS conducted a review of the area to identify unique and protected resources and other special issues of concern. Members of the public had an opportunity to provide comments and identity concerns during a Local Work Group meeting held on November 6, 2000 at the NRCS office in Gallup, NM. The local work group discussed the need for conservation measures to be applied on units within the watershed and believes the most urgent need to be on grazing lands and therefore recommended GPA funding be utilized only to address resource concerns on grazing lands within the watershed. No controversy regarding the need for action or the actions themselves was raised during this meeting and no resource s or issues of concern were identified during this meeting or by NRCS or other Federal, State and Tribal entities other than those discussed in this EA.

Threatened and Endangered Species and Species of Concern: A search of the records shows the following listed species as endangered under the ESA: Bald Eagle, Black-Footed Ferret, Mexican Spotted Owl, Southwestern Willow Flycatcher and the Zuni (rhizome) Fleabane, and the Mountain Plover. Consultation with the U.S. Fish and Wildlife Service will be initiated for the Mexican Spotted Owl Southwestern Willow Flycatcher and Zuni Fleabane prior to implementation. Others will not be affected by the proposed action.

Cultural Resources and Historic Properties: NRCS completed a search of the cultural resource records and have identified 1,520 previously recorded sites in the Zuni River Watershed Geographic Priority Area. Prior to implementation of the practices, site specific surveys will be completed and consultation will be conducted with the appropriate Historic Preservation Offices. American Indian tribes and Pueblos have been invited to local meetings and have been consulted about the alternatives and actions.

Wetlands: The small isolated wetlands within the Zuni River Watershed GPA will not be impacted by conservation measures carried out by NRCS under EQIP.

IMPACTS AND EFFECTS OF ALTERNATIVES:

Alternative 1. No Action

Without cost share assistance through EQIP implementation of conservation activities in the Zuni River Watershed GPA will be reduced. Landusers will be unable to apply needed conservation measures which will lead to the further degradation of grazing lands

and of wetlands and water bodies by increased sediment loading in surface water and basins. Infestation by brush and noxious weeds will continue to crowd out desirable forage species and will lead to lessening of species diversification and depletion of habitat for wildlife (according the Zuni River Watershed report is at 30% of potential), livestock, and endangered species.

Without any action approximately 30 miles of channel, numerous small ponds, wetlands, riparian and wet meadow areas and other water bodies will be directly impacted by increased deposition of sediment in these resources. Continued degradation on this approximately 124,000 acres of rangeland will continue unabated and will also allow for the rapid increase in brush and noxious weed infestation.

Alternative 2. Proposed Action

There are approximately 85 ranches in the area with potential to benefit from the application of conservation systems, which include the following individual, or combination of practices:

EQIP funding will help decrease erosion and runoff, which is leading to sedimentation and deposition and riparian habitat damage as well as loss of available water. In addition, EQIP funding will help improve conditions and increase production of grazing lands and woodlands, which have been invaded by noxious weeds, brush, and non-indigenous species.

Brush Management-Removal, reduction, or manipulation on non-herbaceous plants. Removal of brush will allow for greater vegetative cover on the soil surface, which will reduce wind, and water erosion. Chemical brush control will not contribute to temporary erosion, dust, or excessive runoff. Chemical control will only be carried out according to the label after all permits have been obtained and consultation with the proper authorities has taken place. Mechanical brush control will result in temporary noise, dust, and short term increased wind erosion until vegetative cover increases. The disturbance is temporary and will not result in environmental degradation. Prior to any mechanical treatment is begun cultural resource inventories will be carried out.

Prescribed Grazing-is the controlled harvesting of vegetation with grazing or browsing animals, managed with the intent to achieve a specified objective. The environmental effects of prescribed grazing will be greater and more diverse plant cover and shelter, less brush and noxious weed infestation. Less bare ground and therefore less dust and sheet and rill erosion, which will reduce the amount of, soil moving off site. Distribution of livestock will also improve animal health and productivity and promote economic stability.

Critical Area Planting- consists of planting of vegetation, such as trees, shrubs, vines, grasses, or legumes, on highly erodible or critically eroding areas. Critically eroding areas will be specially treated to establish vegetative cover and reduce damage from sediment and runoff to downstream areas. Machinery installation will result in temporary

noise, dust, and disturbance of the surface. Most seeding will be done by hand, in some cases mulching may be necessary to protect the site until vegetation is established. This practice will not be carried out where cultural resources are present. This practice will also benefit and improve wildlife habitat be reducing sediment loading in water resources and basins.

Diversion-is a channel constructed across the slope with a supporting ridge on the lower side to divert excess water from one area for use or safe disposal in other areas. This practice will be utilized to reduce soil erosion from water in areas where runoff must be diverted to a stable outlet. Construction will utilize machinery to move earth to construct the supporting ridge and channel. Site disturbance will result in minimal noise and dust. This practice will reduce soil erosion and impede transport of soil particles off site and into watercourses. Cultural resource inventories will be conducted in proposed area of effect prior to any construction.

Pond- is a water impoundment made by constructing a dam or an embankment or by excavating a pit or dugout. These ponds will provide water to livestock and wildlife and will enable cattle to properly utilize the entire range by implementing a prescribed grazing system by providing water to areas of the range previously without water. Construction of ponds also allows for cross fencing and thereby enhancing the prescribed grazing system. During construction there will be noise and dust discharged to the environment. This disturbance is temporary. Cultural resource inventories will be conducted prior to any construction.

Pest Management -is managing of agricultural pest infestations of noxious weeds to reduce the adverse effects on plant growth and environmental resources. This practice effectively reduces noxious weed growth and allows for beneficial species of grasses, forbs and brush that will contribute to watershed health through the increase in ground cover and reduction in runoff and erosion and allow for greater water infiltration into the soil profile. Mechanical treatment will result in some noise and dust being emitted. This disturbance is temporary and will not result in environmental degradation. Chemical control will only be carried out according to the label after all permits have been obtained and consultation with the proper authorities has taken place. Before any mechanical treatment is begun cultural resources inventories will be carried out.

Fencing- is a constructed barrier to livestock, wildlife, or people. This practice enables livestock distribution on range units to properly utilize available forage. Fencing allows for resource protection through proper forage management. Fencing requires minimal disturbance unless the route is first bladed. If bladed, dust emissions will be temporary and will not negatively effect environmental resources. Cultural resources will be addressed before fence is constructed. Based on past experience approximately five applicants will sign up for cost share assistance with an average need of 2 miles of fencing each. Of this estimated 52,800 ft. of fence less than 3% will be bladed. In areas where blading is needed, trees will be removed, ground smoothed and most of the vegetation will also be removed. The effect from this practice is temporary as the

construction of fencing allows for control of livestock and overall improvement of the range condition.

Forest Stand Improvement- manipulate species composition, stand structure, and stocking by cutting or killing selected trees and understory vegetation. This practice will improve the ground cover in grazed forest areas thereby reducing soil erosion and improving water quality. Harvesting done by hand will have minimal environmental affect. Large-scale harvesting will produce noise, ground disturbance and dust. Cultural resource clearances will be obtained before any work is begun. This practice will not be carried out in old growth forest areas and will therefore have no effect on the Mexican Spotted Owl.

Grade Stabilization Structure- a structure used to control the grade and head cutting in natural or artificial channels. This practice allows for agrading in actively eroding arroyos and enables vegetation to become established and stabilize the soil. This prevents soil particles from moving downstream and depositing in basins, wetlands, and channel segments below the treated area. Construction is done by hand and there will be no effects from noise, dust of discharge. Cultural resource inventories will be conducted prior to construction.

Pipeline(livestock)-a pipeline installed for conveying water for livestock. This practice allows for proper distribution of the livestock on grazing lands and proper utilization of the resources. Installation of livestock pipelines requires a vertical wall trench to be dug to allow for the pipeline to be a minimum of 15 inches below the surface. Minimal environmental disturbance will be realized from installation and will consist of dust, ground disturbance, and noise. Cultural resource inventories will be conducted prior to any installation of livestock pipelines.

Range Planting-establishment of adapted perennial vegetation such as grasses, forbs, legumes, shrubs, and trees. This practice will allow for better distribution of livestock on rangeland, which will improve range condition, reduce wind and water erosion and protect watercourses and basins and wetlands. Seeding will be either broadcast of drilling. Seedbed preparation will result in temporary disturbance of the ground and may produce dust for a limited time. Results will be increased vegetative cover and reduced wind and water erosion. Cultural resource inventories will be conducted prior to any range plantings.

Well-A well constructed or improved to provide water for irrigation, livestock, wildlife, or recreation. Construction of a livestock well will effect minimal ground disturbance and will not result in any significant environmental degradation. Wind erosion from the disturbed well drilling site will be minimal and temporary. The environmental effects of constructing a livestock well will be improved rangeland health by allowing for proper livestock distribution on the targeted rangeland units. No construction will begin until a cultural resources inventory has been carried out and section 106 consultation forms have been submitted.

Spring Development-Improving springs and seeps by excavating, cleaning, capping, or providing collection and storage facilities. Spring development will only be carried out after consultation with the US Fish and Wildlife Service in addition with appropriate Tribal Departments or Game and Fish with minimal effect determinations made prior to construction. Construction of spring development will result in temporary water quality impairment. Improved rangeland health will result from developing springs by allowing water to be distributed to range areas which will now support livestock grazing and allow proper livestock deployment. A cultural resources inventory will be conducted and section 106 consultation completed.

Trough or Tank-A trough or tank, with needed devices for water control, installed to provide drinking water for livestock. Installation of tanks or troughs will allow for water placement in pastures on range units where previously there was no water available for livestock and therefore livestock were not able to properly utilize and be rotated through the grazing units. This will result in a positive effect on rangeland health. Installation of tanks or troughs will be above grade after a gravel base is placed on the soil surface. No elevated levels of dust or erosion will be encountered. Prior to placement of tanks or troughs a cultural resources inventory will be carried out and section 106 consultation completed.

Streambank and Shoreline Protection-Using vegetation or structures to stabilize and protect banks of streams, lakes, estuaries, or excavated channels against scour and erosion. Implementation of this practice will reduce the amount of sediment entering watercourses, basins, and wetlands. Construction may result in temporary disturbance and soil erosion. The long-term affect will be stabilized streambank, which will not allow for transport of sediment downstream nor into basins, or wetlands. Prior to any work on the streambank consultation will take place with the USA-COE, USF&WS, and appropriate tribal authorities. A cultural resource inventory will also be conducted and section 106 consultation forms filed with appropriated SHPO offices.

Riparian Forest Buffer-An area of predominately trees and/or shrubs located adjacent to and up-gradient from watercourses or water bodies. Fencing off stream corridors to allow for natural regeneration from present, existing seed sources will protect riparian areas. This practice will not result in any disturbance in the stream corridor. Fencing will be installed on the upland areas and parallel the stream corridors. See fencing practice for impacts and effects. Consultation will be conducted with the USF&WS, USA-COE and appropriate tribal authorities. A cultural resources inventory will be conducted prior to installation of fencing.

Wildlife Upland Habitat Management-Creating, maintaining, or enhancing areas, including incidental wetlands, for food and cover for upland wildlife. Prescribed grazing will lead to improved range condition and contribute to improved wildlife habitat. This practice will enhance habitat, which will allow for increased population of wildlife. Implementation of this practice will increase wildlife populations in the treated areas to approximately 50% of potential. Prior to any construction, a cultural resource inventory will be conducted and a section 106 consultation form completed.

Wildlife Watering Facility-Constructing, improving, or modifying watering places for wildlife. Placement of wildlife water guzzlers in remote and or inaccessible rangeland areas will allow for a perennial water supply which will be utilized by a variety of wildlife. Troughs and tanks will also provide perennial water for wildlife on the more accessible rangeland areas where livestock are also grazing. Prior to any construction a cultural resources inventory will be conducted.

Implementation of the identified conservation practices would not be done without the assistance from NRCS through the Environmental Quality Incentives Program. Therefore, the cumulative effect of this program is limited to that which is achieved by assistance from NRCS planning and implementing conservation measures with individual landusers.

Comparison of alternatives
Effects on Needs

Alternatives	No Action	Proposed Action
Rangeland Health	0 acres improved, low fair condition	5,000 acres improve to good condition.
Livestock Industry Sustainability	No, short term sustainability	Long term sustainability
Control Invasion of Brush/Noxious weeds	No, continued invasion	Invasion reduced on 3,000 acres
Reduction of Sediment in Basins, Water Bodies, Wetlands	No, 3.9 ac-ft. Sediment Yield	Reduction in Sediment Yield by 50% to 1.9 ac-ft. estimated
Habitat Protection of Endangered and Threatened Species	0 acres improved, loss of habitat	5,000 acres, improved habitat
Improved Wildlife Habitat	0 acres improved, 30% of potential	5,000 acres of improved Wildlife Habitat, 50% of potential

PERSONS AND AGENCIES CONSULTED:

List of participants at the November 6, 2000 local work group meeting is available at the NRCS field office located in the USDA Service Center, Cedar Hills Plaza, 1658 S. Second Street, Gallup, NM

PERSONS AND AGENCIES INVITED TO COMMENT:

McKinley Soil and Water Conservation District
Lava Soil and Water Conservation District
USFS, Mt. Taylor Ranger District, Chuck Hagardon, District Ranger
USF&WS
USA-COE
NWNMCOG
Cibola County Commissioners
McKinley County Commissioners
NM State Forestry
NM Department of Game and Fish
McKinley County Wildlife Federation
Ramah Navajo Chapter
Chichiltah Navajo Chapter
Bread Springs Navajo Chapter
Navajo Nation Department of Agriculture
Navajo Nation Historic Preservation Department
Navajo Nation Department of Game and Fish
Navajo Nation Natural Heritage Program
USDI-BIA, Navajo Area, Natural Resources Department
Navajo Nation District 16 Landboard
Zuni Conservation Program, Roman Pawluk, Director
BIA-Zuni Agency, Department of Natural Resources
Ducks Unlimited
Forest Guardians
Sierra Club
USDA-FSA County Committee
Ramah Valley Acequia
USDI-BLM
USDI-NPS
NM-State Land Office

REFERENCES:

NRCS Field Office Technical Guide, Section III, Quality Criteria
NRCS Field Office Technical Guide, Section IV, Standards and Specifications
Zuni River Watershed Plan, January, 1998 – as required by the Zuni River Watershed Act of 1992
Zuni River Watershed Plan *Appendices, January, 1998*
ZRW Technical Team Appendices, Table 5, HYDROLOGY AND EROSION TECHNICAL REPORT
Brockman, Hal. 1987 US Forest Service, National Headquarters, Washington, DC

FINDING OF NO SIGNIFICANT IMPACT
For the implementation of EQIP
In the Zuni River Watershed Geographic Priority Area

Introduction

The Zuni River Watershed Geographic Priority Area is a federally assisted action under the Environmental Quality Incentives Program (EQIP), with assistance from the Natural Resources Conservation Service (NRCS). An environmental assessment was undertaken in connection with the development of this proposed action. This assessment was conducted in consultation with local, state, and federal agencies. Data developed during the assessment are available, upon request, from:

U.S. Department of Agriculture
Natural Resources Conservation Service
Cedar Hills Plaza
1658 S. Second Street
Gallup, NM 87301

The Environmental Assessment (EA) is attached for reference.

Determination of Significance

Table 1. Determination of Significance of Proposed Action

CONTEXT	INTENSITY	REASONS FOR NON-SIGNIFICANCE
Improved Range Conditions 5,000 acres good condition.	Permanent improvement.	Range condition under current limitations will never exceed good condition class.
Soil Erosion will be reduced by 60-80% in the GPA	1.22% of the GPA will be treated.	Small percentage of the GPA is treated.

Other considerations related to context and intensity are discussed as follows: There is a low density of human residences in the area and no sectors of commerce or public accommodations, therefore the impact on public health and safety does not exist. There will be no change in the unique character of the area therefore wetlands, historic sites; cultural resources and critical habitat will be protected. No issues or concerns have been expressed at any public meetings; therefore the potential for controversy within the ranching community participating in GPA is low. Results of actions are known from past experiences in the area, therefore, uncertainty and risk are low. There will be no precedent for future action since nearly all ranchers interested in EQIP assistance within the GPA are currently participating in the program. The probability for cumulative impacts from this program are low as NRCS is the only entity assisting land users with conservation measures. There will be no effects on properties listed on or eligible for the

National Register of Historic Places or on cultural resources. All cultural resources in the contract area will be avoided. There will be no Endangered Species or critical habitat affected by this project. There will be consultation with USF&WS prior to working adjacent to critical habitat. This program will not cause any land user to violate any federal, state, local or tribal law.

	December 20, 2001
ROSENDO TREVINO State Conservationist	Date